

MAY 08 2008

Appl. No. 10/511,079
Amdt. Dated May 8, 2008
Reply to Office Action of November 8, 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for correcting a photo mask using an optical proximity effect correction method, said method for correcting a photo mask comprising the steps of:

producing a test mask ~~that functions as a mask for extracting a function model necessary for applying said optical proximity effect correction method;~~

transferring a mask pattern of said test mask on a wafer and measuring the dimensions of ~~a~~ the transferred pattern;

obtaining a function model (referred to as process model) that ~~simulates allows a simulated result of the measured dimensions of the transferred pattern of said photo mask on said wafer matches a measured result obtained at said step of transferring and measuring;~~

obtaining a corrected mask pattern of which a transferred pattern matches a designed pattern ~~by using said process model and creating mask data in accordance with the obtained mask pattern;~~

~~producing a corrected mask in accordance with said created mask data; and~~

selectively setting an exposing condition to alter obtain at least one of a numerical aperture (NA) and a coherence factor (σ) of an

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exposing device depending upon so that an OPE characteristic becomes flat in a predetermined range of a pattern pitch of a region where when said corrected mask is transferred.

2. (Currently Amended) A method for correcting a photo mask according to claim 1,

wherein at said step of producing a test mask, said test mask is produced in a mask producing condition of which an error of line width depending on coarse/dense pattern of said test mask is limited can be restricted in a predetermined an allowable range.

3. (Currently Amended) A method for correcting a photo mask according to claim any of claims 1 to 2,

wherein at said step of producing a corrected mask, said corrected mask is produced in a mask producing condition of which the difference between said test mask and said corrected mask with respect to an error of line width depending on coarse/dense pattern is in the predetermined range.

4. (Previously Presented) A method for correcting a photo mask according to claim 1,

wherein at said step of setting the exposing condition, at least one of

Appl. No. 10/511,079
Am dt. Dated May 8, 2008
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NA and σ of an exposing device is adjusted so that the OPE curve of which the corrected mask is transferred becomes the flattest over all the pitches, and that the difference between the corrected mask and the test mask with respect to the error depending on coarse/dense pattern is reduced.